

IMAGE SENSOR HAVING MICRO-LENS ARRAY SEPARATED WITH TRENCH  
STRUCTURES AND METHOD OF MAKING

ABSTRACT OF THE DISCLOSURE

An image sensor having micro-lenses is disclosed. The image sensor comprises a plurality of pixels formed in a semiconductor substrate, each pixel including a light sensitive element. A micro-lens is formed over each of the light sensitive elements. Finally, a trench structure surrounds each of the micro-lenses.